

S30D30 Thru S30D60

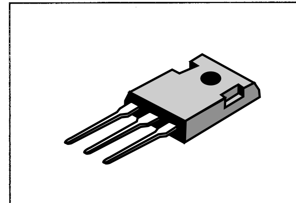
Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

* Low Forward Voltag.
* Low Switching noise.
* High Current Capacity
* Guarantee Reverse Avalance.
* Guard-Ring for Stress Protection.
* Low Power Loss & High efficiency.
* 125 °C Operating Junction Temperature
* Low Stored Charge Majority Carrier Cnduction.
* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

SCHOTTKY BARRIER RECTIFIERS

30 AMPERES
30 -- 60 VOLTS



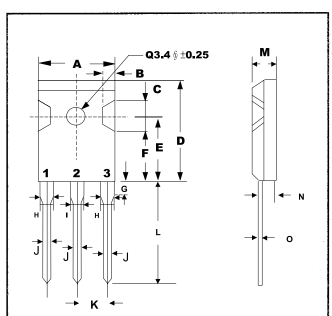
TO-247 (3P)

MAXIMUM RATINGS

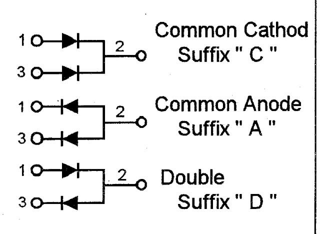
Characteristic	Symbol	S30D						Unit
		30	35	40	45	50	60	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	30	35	40	45	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	24	28	31	35	42	V
Average Rectifier Forward Current Total Device	$I_{F(AV)}$	15 30						A
Peak Repetitive Forward Current (Rate V_R,Square Wave,20kHz)	I_{FRM}	30						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware,single phase,60Hz)	I_{FSM}	300						A
Operating and Storage Junction Temperature Range	T_J , T_{stg}	- 65 to + 125						°C

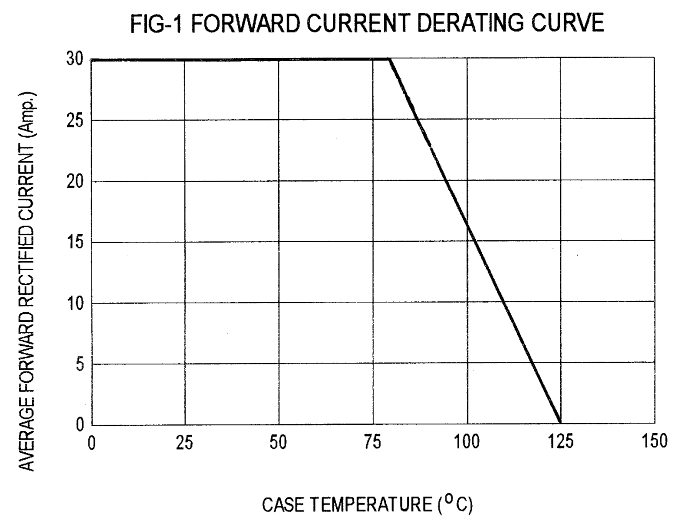
ELECTRICAL CHARACTERISTICS

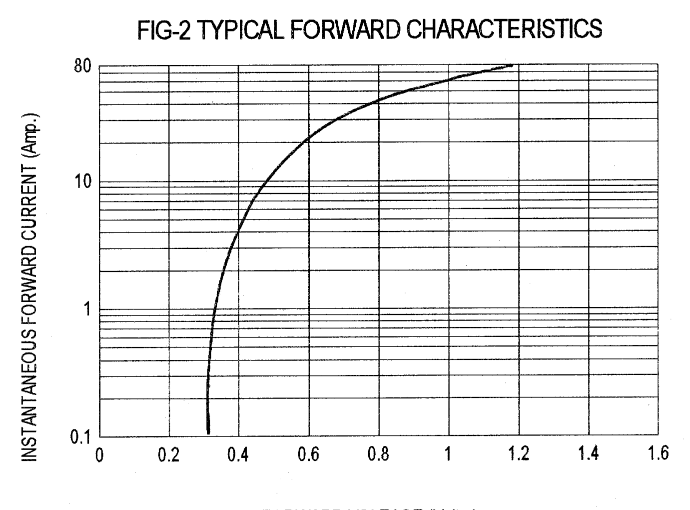
Characteristic	Symbol	S30D						Unit
		30	35	40	45	50	60	
Maximum Instantaneous Forward Voltage (I_F = 15 Amp, T_C = 25 °C) (I_F = 15 Amp, T_C = 100 °C)	V_F	 0.55 0.45				 0.65 0.55		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25 °C) (Rated DC Voltage, T_C = 100 °C)	I_R	 5.0 80						mA

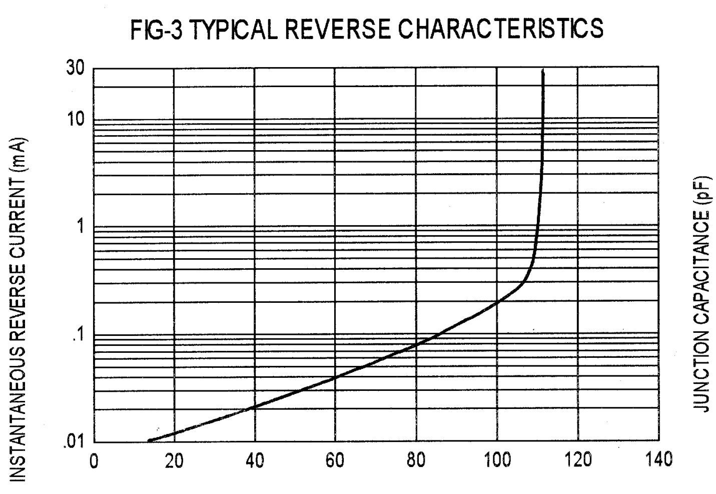


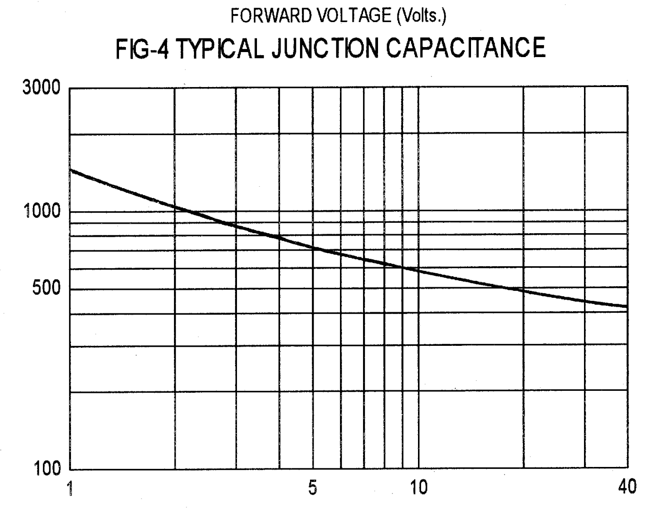
DIM	MILLMETERS	
	MIN	MAX
A	--	16.2
B	1.7	2.7
C	5.0	6.0
D	--	23.0
E	14.8	15.2
F	11.7	12.7
G	--	4.5
H	--	2.5
I	--	3.5
J	1.1	1.4
K	5.25	5.65
L	19	--
M	4.7	5.3
N	2.8	3.2
O	0.45	0.85

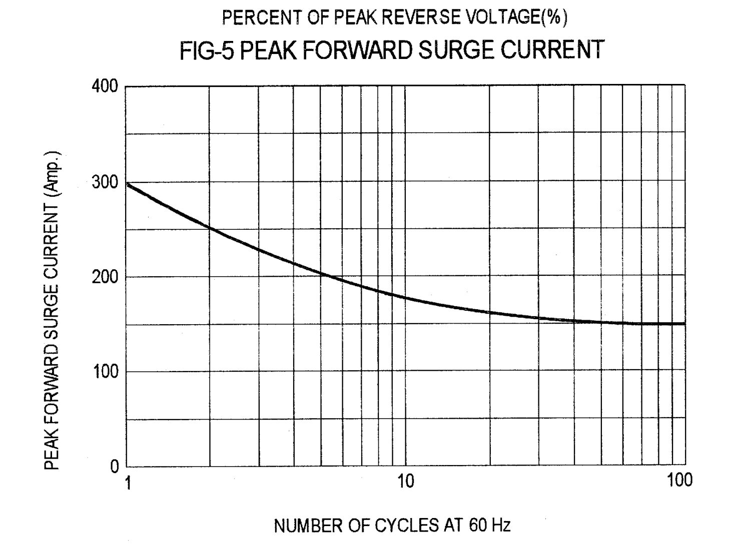



FIG-1 FORWARD CURRENT DERATING CURVE
AVERAGE FORWARD RECTIFIED CURRENT (Amp.)
CASE TEMPERATURE (°C)
0
5
10
15
20
25
30
0
25
50
75
100
125
150


FIG-2 TYPICAL FORWARD CHARACTERISTICS
INSTANTANEOUS FORWARD CURRENT (Amp.)
FORWARD VOLTAGE (Volts.)
0.1
1
10
80
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6


FIG-3 TYPICAL REVERSE CHARACTERISTICS
INSTANTANEOUS REVERSE CURRENT (mA)
PERCENT OF PEAK REVERSE VOLTAGE(%)
.01
.1
1
10
30
0
20
40
60
80
100
120
140


FIG-4 TYPICAL JUNCTION CAPACITANCE
JUNCTION CAPACITANCE (pF)
REVERSE VOLTAGE (Volts.)
100
500
1000
3000
1
5
10
40


FIG-5 PEAK FORWARD SURGE CURRENT
PEAK FORWARD SURGE CURRENT (Amp.)
NUMBER OF CYCLES AT 60 Hz
0
100
200
300
400
1
10
100

S30D50 , S30D60

